

**Hand Taps**

GREENFIELD



TAPER



PLUG



BOTTOMING

Hand taps up to and including  $\frac{3}{8}$  inch have shanks the diameter of thread. Taps  $\frac{5}{8}$  inch and larger have shanks smaller than the root diameter of the tap.

Sizes and dimensions not listed and left hand thread taps are special.

**CARBON STEEL****M-303T Taper, M-303P Plug, M-303B Bottoming**

Diam. Tap, In.	Mfr's List, Each	Threads per Inch			No. Flutes	Lgth. Over All, In.	Each
		N.C. Per Set (U.S.S.)	N.F. (S.A.E.)	N.S. (U.S.F.)			
$\frac{1}{8}$	\$0.50	\$1.50	---	64	3	$1\frac{1}{8}$	\$0.55
$\frac{5}{16}$	.40	1.20	---	48	3	$1\frac{1}{4}$	.45
$\frac{3}{8}$	.35	1.05	---	40	3	$1\frac{1}{16}$	.40
$\frac{7}{16}$	.35	1.05	---	32, 36	4	$2\frac{1}{16}$	.40
$\frac{1}{2}$	.40	1.20	---	24, 32	4	$2\frac{3}{8}$	.45
$\frac{9}{16}$	.45	1.35	---	24, 32	4	$2\frac{3}{8}$	.50
$\frac{5}{8}$	.45	1.35	20	28	4	$2\frac{1}{2}$	.60
$\frac{1}{4}$	.50	1.50	18	24	4	$2\frac{3}{32}$	.70
$\frac{11}{16}$	.55	1.65	16	24	4	$2\frac{1}{8}$	.75
$\frac{3}{4}$	.60	1.80	14	20	4	$3\frac{1}{32}$	.90
$\frac{13}{16}$	.70	2.10	13	20	4	$3\frac{3}{8}$	1.05
$\frac{1}{2}$	.80	2.40	12	18	4	$3\frac{1}{2}$	1.20
$\frac{15}{16}$	.90	2.70	11	18	4	$3\frac{1}{16}$	1.35
$\frac{1}{4}$	1.05	3.15	---	11, 16	4	$4\frac{1}{2}$	1.65
$\frac{3}{8}$	1.20	3.60	10	16	4	$4\frac{1}{4}$	1.90
$\frac{7}{16}$	1.60	4.80	9	14	4	$4\frac{1}{8}$	2.55
1	2.00	6.00	8	14	4	$5\frac{1}{8}$	3.15
$1\frac{1}{8}$	2.25	6.75	7	*12	4	$5\frac{7}{16}$	4.20
$1\frac{1}{4}$	2.60	7.80	7	*12	4	$5\frac{3}{4}$	4.90
$1\frac{3}{8}$	3.00	9.00	6	*12	4	$6\frac{1}{16}$	5.65
$1\frac{1}{2}$	3.50	10.50	6	*12	4	$6\frac{3}{8}$	6.55
$1\frac{5}{8}$	4.20	12.60	---	5 $\frac{1}{2}$	6	$6\frac{1}{16}$	7.90
$1\frac{3}{4}$	5.00	15.00	5	---	6	7	9.40
$1\frac{7}{8}$	5.80	17.40	---	5	6	$7\frac{5}{16}$	10.85
2	6.70	20.10	4 $\frac{1}{2}$	---	6	$7\frac{3}{8}$	12.55

**HIGH SPEED STEEL****"Tru-Lede" Commercial Ground Thread****M-5303T Taper, M-5303P Plug, M-5303B Bottoming**

Diam. Tap, In.	Mfr's List, Each	Threads per Inch			No. Flutes	Lgth. Over All, In.	Each
		N.C.	N.F.	N.S.			
$\frac{1}{4}$	\$ 0.85	20	28	---	4	$2\frac{1}{2}$	\$ 1.10
$\frac{5}{16}$	.95	18	24	---	4	$2\frac{3}{32}$	1.25
$\frac{3}{8}$	1.10	16	24	---	4	$2\frac{1}{8}$	1.40
$\frac{7}{16}$	1.30	14	20	---	4	$3\frac{5}{32}$	1.65
$\frac{1}{2}$	1.55	13	20	---	4	$3\frac{3}{8}$	2.00
$\frac{9}{16}$	1.85	12	18	---	4	$3\frac{1}{2}$	2.35
$\frac{5}{8}$	2.20	11	18	---	4	$3\frac{1}{16}$	3.45
$\frac{11}{16}$	# 2.60	---	---	11, 16	4	$4\frac{1}{2}$	4.10
$\frac{3}{4}$	3.10	10	16	---	4	$4\frac{1}{4}$	4.90
$\frac{7}{8}$	# 4.30	9	14	---	4	$4\frac{1}{8}$	6.80
1	# 4.50	8	14	---	4	$5\frac{1}{8}$	9.05
$1\frac{1}{8}$	# 5.75	7	12	---	4	$5\frac{7}{16}$	11.75
$1\frac{1}{4}$	# 7.45	7	12	---	4	$5\frac{3}{4}$	15.00
$1\frac{3}{8}$	# 9.55	7	12	---	4	$6\frac{1}{16}$	18.85
$1\frac{1}{2}$	# 11.95	6	12	---	4	$6\frac{3}{8}$	31.85
	# 14.75	6	12	---	4	$6\frac{3}{8}$	

**Hand Taps**

GREENFIELD

**Cut Thread—High Speed Steel****M-6303T Taper, M-6303P Plug, M-6303B Bottoming**

Diam. Tap, In.	Mfr's List, Each	Threads per Inch			No. Flutes	Lgh. Over All, In.	Each
		N.C.	N.F.	N.S.			
$\frac{1}{4}$	\$ 0.85	20	28	---	4	$2\frac{1}{2}$	\$ 1.10
$\frac{5}{16}$	.95	18	24	---	4	$2\frac{3}{32}$	1.25
$\frac{3}{8}$	1.10	16	24	---	4	$2\frac{1}{8}$	1.40
$\frac{7}{16}$	1.30	14	20	---	4	$3\frac{5}{32}$	1.65
$\frac{1}{2}$	1.55	13	20	---	4	$3\frac{3}{8}$	2.00
$\frac{9}{16}$	1.85	12	18	---	4	$3\frac{1}{2}$	2.35
$\frac{5}{8}$	2.20	11	18	---	4	$3\frac{1}{16}$	3.45
$\frac{11}{16}$	# 2.60	---	---	11, 16	4	$4\frac{1}{2}$	4.10
$\frac{3}{4}$	3.10	10	16	---	4	$4\frac{1}{4}$	4.90
$\frac{7}{8}$	# 4.30	9	14	---	4	$4\frac{1}{8}$	6.80
1	# 4.50	8	14	---	4	$5\frac{1}{8}$	9.05
$1\frac{1}{8}$	# 5.75	7	12	---	4	$5\frac{7}{16}$	11.75
$1\frac{1}{4}$	# 7.45	7	12	---	4	$5\frac{3}{4}$	15.00
$1\frac{3}{8}$	# 9.55	7	12	---	4	$6\frac{1}{16}$	18.85
$1\frac{1}{2}$	# 11.95	6	12	---	4	$6\frac{3}{8}$	31.85
	# 14.75	6	12	---	4	$6\frac{3}{8}$	

**Precision Ground Thread****M-7303T Taper, M-7303P Plug, M-7303B Bottoming**

Diam. Tap, In.	Mfr's List, Each	Threads per Inch			No. Flutes	Lgh. Over All, In.
		N.C.	N.F.	N.S.		
$\frac{1}{4}$	\$ 0.85	20	28	---	4	$2\frac{1}{2}$
$\frac{5}{16}$	.95	18	24	---	4	$2\frac{3}{32}$
$\frac{3}{8}$	1.10	16	24	---	4	$2\frac{1}{8}$
$\frac{7}{16}$	1.30	14	20	---	4	$3\frac{5}{32}$
$\frac{1}{2}$	1.55	13	20	---	4	$3\frac{3}{8}$
$\frac{9}{16}$	1.85	12	18	---	4	$3\frac{1}{2}$
$\frac{5}{8}$	2.20	11	18	---	4	$3\frac{1}{16}$
$\frac{11}{16}$	# 2.60	---	---	11, 16	4	$4\frac{1}{2}$
$\frac{3}{4}$	3.10	10	16	---	4	$4\frac{1}{4}$
$\frac{7}{8}$	# 4.30	9	14	---	4	$4\frac{1}{8}$
1	# 4.50	8	14	---	4	$5\frac{1}{8}$
$1\frac{1}{8}$	# 5.75	7	12	---	4	$5\frac{7}{16}$
$1\frac{1}{4}$	# 7.45	7	12	---	4	$5\frac{3}{4}$
$1\frac{3}{8}$	# 9.55	7	12	---	4	$6\frac{1}{16}$
$1\frac{1}{2}$	# 11.95	6	12	---	4	$6\frac{3}{8}$
	# 14.75	6	12	---	4	$6\frac{3}{8}$

**Stove Bolt Taps**

GREENFIELD



These taps are furnished with "Manufacturers' Standard" form of thread in plug style only and in carbon steel only.

Sizes and dimensions not listed are special.

Taper and bottoming taps are special.

Left-hand taps are special.

**M-314—Plug Style Only**

Diam. Tap, In.	Mfr's List, Each	Threads Per In.	No. of Flutes	Lgh. Over All, In.	Each
$\frac{5}{16}$	\$ 0.40	24	4	$2\frac{3}{8}$	\$ 0.50
$\frac{1}{4}$	.45	18	4	$2\frac{1}{2}$	.60
$\frac{7}{16}$	# .50	18	4	$2\frac{3}{32}$	.75

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

\* Goods marked thus (#) are not carried in stock and can be furnished only by shipment direct from factory.

**Three-Fluted Hand Taps**  
GREENFIELD



These taps are furnished with American National form of thread in plug or bottoming style at regular prices.

Hand taps to and including  $\frac{3}{8}$  inch have shanks smaller than the root diameter of the thread.

Sizes and dimensions not listed are special.

Taper taps are special.

Left-hand taps are special.

**CARBON STEEL**

Three fluted—M-303-P Plug

Diam. Tap, Inch	Mfr's List, Three Fluted	Threads per In. NC	Length Over all
$\frac{1}{4}$	± \$0.45	20	$2\frac{1}{2}$
$\frac{5}{16}$	± .50	18	$2\frac{3}{8}$
$\frac{3}{8}$	± .55	16	$2\frac{1}{8}$

**HIGH SPEED STEEL**

"Tru-Lede" Commercial Ground Thread

Three fluted—M-5303-P Plug; M-5303-B Bottoming.

Diam. Tap, Inch	Mfr's List, Three Fluted	Threads per In. NC	Length Over all
$\frac{1}{4}$	± \$0.85	20	$2\frac{1}{2}$
$\frac{5}{16}$	± .95	18	$2\frac{3}{8}$
$\frac{3}{8}$	± 1.10	16	$2\frac{1}{8}$
$\frac{7}{16}$	± 1.30	14	$3\frac{5}{8}$
$\frac{1}{2}$	± 1.55	13	$3\frac{3}{8}$

**Cut Thread**

Three fluted—M-6303-P Plug; M-6303-B Bottoming.

Diam. Tap, Inch	Mfr's List, Three Fluted	Threads per In. NC	Length Over all
$\frac{1}{4}$	± \$0.85	20	$2\frac{1}{2}$
$\frac{5}{16}$	± .95	18	$2\frac{3}{8}$
$\frac{3}{8}$	± 1.10	16	$2\frac{1}{8}$
$\frac{7}{16}$	± 1.30	14	$3\frac{5}{8}$
$\frac{1}{2}$	± 1.55	13	$3\frac{3}{8}$

**Precision Ground Thread**

Three fluted—M-7303-P Plug; M-7303-B Bottoming.

Diam. Tap, Inch	Mfr's List, Three Fluted	Threads per In. NC	Length Over all
$\frac{1}{4}$	± \$0.85	20	$2\frac{1}{2}$
$\frac{5}{16}$	± .95	18	$2\frac{3}{8}$
$\frac{3}{8}$	± 1.10	16	$2\frac{1}{8}$
$\frac{7}{16}$	± 1.30	14	$3\frac{5}{8}$
$\frac{1}{2}$	± 1.55	13	$3\frac{3}{8}$

**Machine Screw Taps**  
GREENFIELD



Taper



Plug



Bottoming

Machine screw taps are made with varying number of flutes. These taps are furnished with National form of thread and standard number of flutes in taper, plug and bottoming style at regular prices. When these taps are specified with an optional number of flutes as listed, they will be furnished in plug or bottoming styles only at regular prices. Sizes and dimensions not listed are special. Left-hand taps are special.

**CARBON STEEL**

M-305-T Taper      M-305-P Plug      M-305-B Bottoming

Screw Mfr's Gauge List,	Basic Major	Threads per in.		No. of Flutes,	Length			
No.	Each	Diam., In.	N.C. N.F. N.S.	Std. Opt'l	Over all, In.	Each		
0	\$0.50	.060	---	80	2	1 $\frac{1}{8}$	\$0.55	
1	.50	.073	64	72	2	1 $\frac{1}{8}$	.55	
2	.45	.086	56	64	3	1 $\frac{1}{4}$	.50	
3	.40	.099	48	56	3	1 $\frac{1}{8}$	.45	
4	.40	.112	40	48	3, 36	1 $\frac{1}{8}$	.45	
5	.35	.125	40	44	3	1 $\frac{1}{8}$	.40	
6	.35	.138	32	40	36	2	.40	
8	.35	.164	32	36	40	3	2 $\frac{1}{8}$	.40
10	.40	.190	24	32	30	4	2 $\frac{3}{8}$	.45
12	.45	.216	24	28	32	4	2 $\frac{3}{8}$	.45
14	.45	.242	---	20, 24	4	2 $\frac{1}{2}$	.60	

**HIGH SPEED STEEL**

"Tru-Lede" Commercial Ground Thread

M-5305-T Taper      M-5305-P Plug      M-5305-B Bottoming

Screw Mfr's Gauge List,	Basic Major	Threads per In.		No. of Flutes,	Length		
No.	Each	Diam., In.	A. S. M. E.	Std. Opt'l	Over all, In.		
3	\$0.85	.099	48	56	3	2	1 $\frac{1}{8}$
4	.70	.112	40	48	36	3	1 $\frac{1}{8}$
5	.70	.125	40	44	3	2	1 $\frac{1}{8}$
6	.70	.138	32	40	3	2	2
8	.70	.164	32	36	4	2, 3	2 $\frac{1}{8}$
10	.75	.190	24	32	4	2, 3	2 $\frac{3}{8}$
12	.80	.216	24	28	4	2 $\frac{3}{8}$	1.00
14	.85	.242	---	20, 24	4	2 $\frac{1}{2}$	1.10

**Cut Thread**

M-6305-T Taper      M-6305-P Plug      M-6305-B Bottoming

Screw Mfr's Gauge List,	Basic Major	Threads per in.		No. of Flutes,	Length		
No.	Each	Diam., In.	N.C. N.F. N.S.	Std. Opt'l	Over all, In.	Each	
3	\$0.85	.099	48	56	3	2	1 $\frac{1}{8}$
4	.70	.112	40	48	36	3	1 $\frac{1}{8}$
5	.70	.125	40	44	3	2	1 $\frac{1}{8}$
6	.70	.138	32	40	3	2	.90
8	.70	.164	32	36	4	2, 3	.90
10	.75	.190	24	32	4	2, 3	2 $\frac{3}{8}$
12	.80	.216	24	28	4	2 $\frac{3}{8}$	1.00
14	.85	.242	---	20, 24	4	2 $\frac{1}{2}$	1.10

**Precision Ground Thread**

M-7305-T Taper      M-7305-P Plug      M-7305-B Bottoming

Screw Mfr's Gauge List,	Basic Major	Threads per in.		No. of Flutes,	Length		
No.	Each	Diam., In.	N.C. N.F. N.S.	Std. Opt'l	Over all, In.		
0	± \$2.40	.060	---	80	2	1 $\frac{1}{8}$	
1	± 2.20	.073	64	72	2	1 $\frac{1}{8}$	
2	± 2.05	.086	56	64	3	1 $\frac{1}{4}$	
3	± 1.50	.099	48	56	3	2	1 $\frac{1}{8}$
4	± 1.30	.112	40	48	36	3	1 $\frac{1}{8}$
5	± 1.30	.125	40	44	3	2	1 $\frac{1}{8}$
6	± 1.30	.138	32	40	3	2	2
8	± 1.30	.164	32	36	4	2, 3	2 $\frac{1}{8}$
10	± 1.35	.190	24	32	4	2, 3	2 $\frac{3}{8}$
12	± 1.40	.216	24	28	4	2	2 $\frac{3}{8}$

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

† Goods marked thus (†) are not carried in stock and can be furnished only by shipment direct from factory.

**Pulley Taps**  
GREENFIELD



Pulley taps are for tapping the set screw and oil cup holes in the hubs of pulleys. They are of varying lengths to work in pulleys of different diameters since they have to tap through a hole in the rim.

The shanks are made the full size of the threads and serve as a guide. These taps are furnished with American National or Whitworth form of thread in plug style only at regular prices. Sizes and dimensions not listed are special. Taper and bottoming taps are special. Left-hand taps are special.

**CARBON STEEL — M-308—Plug Style Only**

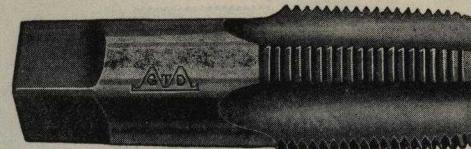
<b>Size of Tap</b>		<b>Mfr's</b>	<b>Length</b>	<b>Threads Per Inch</b>	<b>No. of</b>
<b>Diam., Over All,</b>	<b>In.</b>	<b>List, Each</b>	<b>Each</b>	<b>N.C.</b>	<b>Flutes</b>
1/4	6	\$ .65	20	4	
1/4	8	\$ .70	20	4	
5/16	6	\$ .70	18	4	
5/16	8	\$ .75	18	4	
3/8	6	\$ .80	16	4	
3/8	8	\$ .85	16	4	
5/16	10	\$ .90	16	4	
5/16	6	\$ .85	14	4	
7/16	8	\$ .95	14	4	
10	10	\$ 1.00	14	4	
1/2	6	\$ .95	13	4	
1/2	8	\$ 1.05	13	4	
1/2	10	\$ 1.10	13	4	
1/2	12	\$ 1.15	13	4	
5/8	6	\$ 1.10	11	4	
5/8	8	\$ 1.35	11	4	
5/8	10	\$ 1.40	11	4	
5/8	12	\$ 1.50	11	4	
3/4	10	\$ 1.85	10	4	
3/4	12	\$ 1.95	10	4	

**HIGH SPEED STEEL**

**M-5308—Plug Style Only—Commercial Ground Thread**

<b>Size of Tap</b>		<b>Length</b>	<b>Threads</b>	<b>No. of</b>
<b>Diameter</b>	<b>Overall,</b>	<b>Mfr's List,</b>	<b>Per In.,</b>	<b>Flutes</b>
<b>Ins.</b>	<b>Ins.</b>	<b>Each</b>	<b>N.C.</b>	
1/4	6	\$ 1.70	20	4
1/4	8	\$ 2.25	20	4
5/16	6	\$ 1.70	18	4
5/16	8	\$ 2.30	18	4
3/8	6	\$ 2.00	16	4
3/8	8	\$ 2.60	16	4
3/8	10	\$ 3.20	16	4
7/16	6	\$ 2.10	14	4
7/16	8	\$ 2.75	14	4
7/16	10	\$ 3.50	14	4
1/2	6	\$ 2.25	13	4
1/2	8	\$ 3.10	13	4
1/2	10	\$ 3.75	13	4
1/2	12	\$ 4.40	13	4
5/8	6	\$ 2.90	11	4
5/8	8	\$ 4.10	11	4
5/8	10	\$ 5.00	11	4
5/8	12	\$ 5.80	11	4
3/4	10	\$ 6.10	10	4
3/4	12	\$ 7.10	10	4

**Taper Pipe Tap**  
GREENFIELD



**M-6320—Regular Thread**



**M-6319—Interrupted Thread**

The nominal size of a pipe tap is that of the pipe fitting to be tapped and not the actual size of the tap.

**CARBON STEEL**

American National Form are standard.

**M-320—Regular Thread—Right Hand**

<b>Nominal Size, In.</b>	<b>Mfr's List, Each</b>	<b>Each Amer.</b>	<b>Per In.,</b>	<b>No. of Flutes</b>	<b>Length Over All, In.</b>	<b>Each Regular</b>
<b>Nominal Size, In.</b>	<b>Regular</b>	<b>Natl.</b>	<b>Amer.</b>	<b>Regular</b>	<b>All, In.</b>	
1/8	\$ 1.00	27	4	2 1/8		\$ 0.85
1/4	1.20	18	4	2 1/8		1.00
3/8	1.60	18	4	2 1/8		1.35
1/2	2.00	14	4	3 1/8		1.65
5/8	2.80	14	5	3 1/4		2.35
1	4.40	11 1/2	5	3 3/4		3.65
1 1/4	5.00	11 1/2	5	4		5.00
1 1/2	6.60	11 1/2	6	4 1/4		6.45
2	10.00	11 1/2	6	4 1/2		9.75
2 1/2	\$ 15.00	8	8	5 1/2		20.25
3	\$ 22.50	8	8	6		30.40
3 1/2	\$ 30.00	8	9	6 1/2		47.25
4	\$ 45.00	8	9	6 1/2		70.90

**HIGH SPEED STEEL**

Ground thread taps are standard in both right hand American Standard Pipe Form and American Standard Dryseal Pipe Form. Dryseal taps are used to tap fittings which will give a pressure tight joint without the use of a "sealer."

**M-5320 Right Hand Ground Thread\***

<b>Nominal Size, In.</b>	<b>Mfr's List, Each</b>	<b>Threads Per In.</b>	<b>No. of Flutes</b>	<b>Lgth. Over All, In.</b>
1/8	\$ 1.60	27	4	2 1/8
1/4	1.80	18	4	2 1/8
3/8	2.30	18	4	2 1/8
1/2	4.40	14	4	3 1/8
5/8	6.10	14	5	3 1/4
1	9.20	11 1/2	5	3 3/4
1 1/4	13.10	11 1/2	5	4
1 1/2	17.70	11 1/2	6	4 1/4
2	\$ 24.00	11 1/2	6	4 1/2

\*Note: Dryseal Pipe Form taps are available for shipment direct from the factory. P.O.A.

**Cut Thread**

**M-6320—Regular Thread—Right Hand**

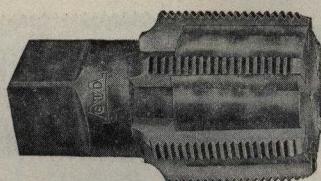
High Speed Cut Thread Taps are standard in American Standard Pipe Form.

**M-6319—Interrupted Thread—Right Hand**

<b>Nominal Size, In.</b>	<b>Mfr's List, Each</b>	<b>Inter-rupted</b>	<b>Threads Per In.</b>	<b>No. of Flutes</b>	<b>Lgth. Over All, In.</b>	<b>Each</b>
<b>Nominal Size, In.</b>	<b>M-6320</b>	<b>M-6319</b>	<b>Reg-ular</b>	<b>Inter-rupted</b>	<b>Reg-ular</b>	<b>Inter-rupted</b>
1/8	\$ 1.60	\$ 2.00	27	4	5	2 1/8
1/4	1.80	\$ 2.20	18	4	5	2 1/8
3/8	2.30	\$ 2.80	18	4	5	2 1/8
1/2	4.40	\$ 5.25	14	4	5	3 1/8
5/8	6.10	\$ 7.30	14	5	5	3 1/4
1	9.20	\$ 11.10	11 1/2	5	5	3 3/4
1 1/4	13.10	\$ 15.75	11 1/2	5	5	4
1 1/2	17.70	\$ 21.25	11 1/2	6	7	4 1/4
2	\$ 24.00	\$ 28.80	11 1/2	6	7	4 1/2

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.  
\*Goods marked thus (#) are not carried in stock and can be furnished only by shipment direct from factory.

**Inserted Chaser Taper Pipe Taps**  
GREENFIELD



This type of pipe tap has inserted chasers made of a superior grade of steel. The chasers are easily and quickly replaced at a moderate cost. Users of large size pipe taps will find this type of tap to be considerably more economical than the solid type.

These taps are regularly furnished with American Standard form of thread (NPT).

Inserted chaser straight pipe taps are special.

Inserted chaser pipe taps are made with cut thread only.

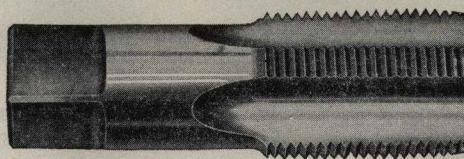
Left-hand taps are special.

**HIGH SPEED STEEL**  
Cut Thread

**M-6321 Regular Thread—Right Hand**

Nominal Size, In.	Mfr's List, Each		Threads Chasers Per In. to a Set		No.
	Tap	Chasers, Set	8	6	
2½	+\$32.00	+\$18.00	8	6	
3	+\$40.00	+\$20.00	8	6	
3½	+\$50.00	+\$20.00	8	6	
4	+\$60.00	+\$20.00	8	6	
4½	+\$70.00	+\$20.00	8	6	
5	+\$90.00	+\$30.00	8	8	
6	+\$110.00	+\$30.00	8	8	

**Straight Pipe Taps**  
GREENFIELD



These taps are furnished with American National thread in plug style only at regular prices.

Unless otherwise specified orders for  $\frac{1}{2}$  inch pipe taps will be filled with taps having the large shank.

American National form cut thread straight pipe taps are made from under to over basic, to permit a taper pipe gage to enter up to the notch. Therefore, a basic straight pipe gage will not always enter a threaded hole tapped with a cut thread straight pipe tap.

When so specified straight pipe taps in sizes  $\frac{1}{8}$  inch to  $\frac{1}{2}$  inch, inclusive, will be furnished with undersize thread for grease cup fittings. Grease taps are furnished with small shank only.

Sizes and dimensions not listed are special.  
Left-hand taps are special.

**CARBON STEEL**  
**M-323 Regular Thread—Right Hand**

Nominal Size, In.	Mfr's List, Each	Threads Per In.	No. of Flutes	Lgth. Over All, In.
$\frac{1}{8}$	\$1.00	27	4	$2\frac{1}{8}$
$\frac{1}{4}$	1.20	18	4	$2\frac{7}{16}$
$\frac{3}{8}$	1.60	18	4	$2\frac{9}{16}$
$\frac{1}{2}$	2.00	14	4	$3\frac{1}{8}$
$\frac{5}{8}$	2.80	14	5	$3\frac{1}{4}$
1	4.40	$11\frac{1}{2}$	5	$3\frac{3}{4}$
$1\frac{1}{4}$	5.00	$11\frac{1}{2}$	5	4
$1\frac{1}{2}$	+\$6.60	$11\frac{1}{2}$	6	$4\frac{1}{4}$
2	+\$10.00	$11\frac{1}{2}$	6	$4\frac{1}{2}$

**HIGH SPEED STEEL**  
Ground Thread\*

**M-5323 Regular Thread—Right Hand**

Nominal Size, In.	Mfr's List, Each	Threads Per In.	No. of Flutes	Lgth. Over All, In.
$\frac{1}{8}$	+\$1.60	27	4	$2\frac{1}{8}$
$\frac{1}{4}$	+\$1.80	18	4	$2\frac{7}{16}$
$\frac{3}{8}$	+\$2.30	18	4	$2\frac{9}{16}$
$\frac{1}{2}$	+\$4.40	14	4	$3\frac{1}{8}$
$\frac{5}{8}$	+\$6.10	14	5	$3\frac{1}{4}$
1	+\$9.20	$11\frac{1}{2}$	5	$3\frac{3}{4}$

\*Note: American Standard Dryseal Pipe Form taps are available from  $\frac{1}{8}$  to  $\frac{1}{2}$  inch sizes inclusive for factory shipment. Dryseal taps are used to tap fittings which will give a pressure tight joint without the use of a "sealer." P.O.A.

Cut Thread

**M-6323 Regular Thread—Right Hand**

Nominal Size, In.	Mfr's List, Each	Threads Per In.	No. of Flutes	Lgth. Over All, In.
$\frac{1}{8}$	\$1.60	27	4	$2\frac{1}{8}$
$\frac{1}{4}$	1.80	18	4	$2\frac{7}{16}$
$\frac{3}{8}$	2.30	18	4	$2\frac{9}{16}$
$\frac{1}{2}$	4.40	14	4	$3\frac{1}{8}$
$\frac{5}{8}$	6.10	14	5	$3\frac{1}{4}$
1	9.20	$11\frac{1}{2}$	5	$3\frac{3}{4}$

**Greenfield Tap and Reamer Wrenches**  
Are Products of  
Superior Craftsmanship—  
Made to Give Complete Satisfaction

**Chart of Tap Drill Sizes**

**STANDARD HAND TAPS**

Tap Size	Threads Per Inch	Drill	Tap Size	Threads Per Inch	Drill
$\frac{1}{8}$	40 N.S.	38	$\frac{3}{4}$	16 N.F.	$\frac{11}{16}$
$\frac{5}{16}$	24 N.S.	26	$\frac{11}{16}$	10 N.S.	$\frac{33}{32}$
$\frac{1}{4}$	20 N.C.	7	$\frac{7}{8}$	9 N.C.	$\frac{41}{32}$
$\frac{1}{4}$	28 N.F.	3	$\frac{7}{8}$	14 N.F.	$\frac{11}{16}$
$\frac{7}{16}$	18 N.C.	F	$\frac{7}{8}$	18 N.S.	$\frac{41}{32}$
$\frac{7}{16}$	24 N.F.	I	$\frac{9}{8}$	9 N.S.	$\frac{53}{48}$
$\frac{1}{2}$	24 N.F.	$\frac{11}{16}$	$\frac{9}{8}$	18 N.S.	$\frac{41}{32}$
$\frac{1}{2}$	16 N.C.	$\frac{11}{16}$	1	8 N.C.	$\frac{7}{8}$
$\frac{5}{8}$	24 N.F.	Q	1	14 N.F.	$\frac{11}{16}$
$\frac{5}{8}$	14 N.C.	U	1	7 N.C.	$\frac{33}{32}$
$\frac{11}{16}$	20 N.F.	$\frac{11}{16}$	$\frac{11}{16}$	12 N.F.	$1\frac{1}{16}$
$\frac{11}{16}$	13 N.C.	$\frac{11}{16}$	$\frac{11}{16}$	7 N.C.	$1\frac{1}{16}$
$\frac{1}{2}$	20 N.F.	$\frac{11}{16}$	$\frac{11}{16}$	12 N.F.	$1\frac{1}{16}$
$\frac{1}{2}$	12 N.C.	$\frac{11}{16}$	$\frac{11}{16}$	6 N.C.	$1\frac{1}{16}$
$\frac{11}{16}$	18 N.F.	$\frac{11}{16}$	$\frac{11}{16}$	12 N.F.	$1\frac{1}{16}$
$\frac{11}{16}$	11 N.C.	$\frac{11}{16}$	$\frac{11}{16}$	6 N.C.	$1\frac{1}{16}$
$\frac{11}{16}$	18 N.F.	$\frac{11}{16}$	$\frac{11}{16}$	12 N.F.	$1\frac{1}{16}$
$\frac{11}{16}$	11 N.S.	$\frac{11}{16}$	$\frac{11}{16}$	5 $\frac{1}{2}$ N.S.	$1\frac{1}{16}$
$\frac{11}{16}$	16 N.S.	$\frac{11}{16}$	2	5 N.C.	$1\frac{1}{16}$
$\frac{11}{16}$	10 N.C.	$\frac{11}{16}$	2	5 N.S.	$1\frac{1}{16}$

**MACHINE SCREW TAPS**

Tap Size	Threads Per Inch	Drill	Tap Size	Threads Per Inch
0	80 N.F.	$\frac{11}{16}$	$\frac{1}{8}$	27
1	64 N.C.	53	$\frac{1}{4}$	18
1	72 N.F.	53	$\frac{3}{8}$	18
2	56 N.C.	50	$\frac{1}{2}$	14
2	64 N.F.	49	$\frac{3}{4}$	14
3	48 N.C.	46	1	$11\frac{1}{2}$
3	56 N.F.	45	$1\frac{1}{4}$	$11\frac{1}{2}$
4	40 N.C.	43	$1\frac{1}{2}$	$11\frac{1}{2}$
4	48 N.F.	42	2	$11\frac{1}{2}$
5	40 N.C.	38	$2\frac{1}{2}$	8
5	44 N.F.	37	3	8
6	32 N.C.	35	$3\frac{1}{2}$	8
6	40 N.F.	33	4	8
8	32 N.C.	29		
8	36 N.F.	29		
10	24 N.C.	25		
10	32 N.F.	21		
12	24 N.C.	16		
12	28 N.F.	14		
14	20 N.S.	10		
14	24 N.S.	7		

**TAPER PIPE TAPS**

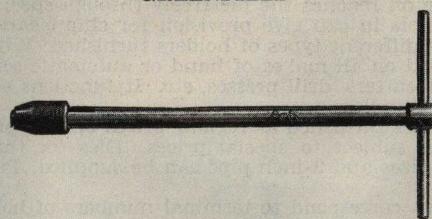
Tap Size	Threads Per Inch	Drill
0	27	$\frac{11}{16}$
1	18	$\frac{11}{16}$
1	18	$\frac{3}{8}$
2	14	$\frac{11}{16}$
2	14	$\frac{1}{2}$
3	14	$\frac{3}{4}$
4	14	$1\frac{1}{16}$
5	14	$1\frac{1}{16}$
6	14	$2\frac{1}{2}$
8	14	$3\frac{1}{2}$
10	21	$4\frac{1}{16}$
12	16	$4\frac{1}{16}$
12	14	$4\frac{1}{16}$
14	10	$4\frac{1}{16}$
14	7	$4\frac{1}{16}$

All Sizes N.P.T.  
(American Std. Thread)

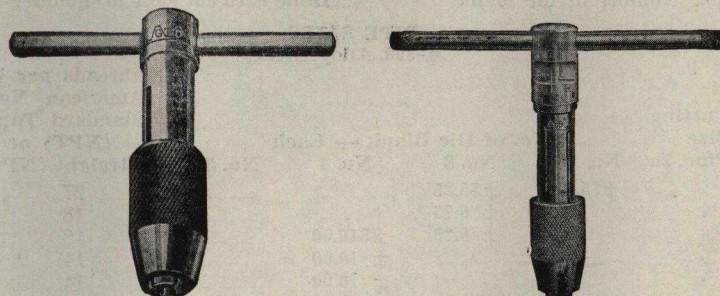
Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.  
\*Goods marked thus ( $\ddagger$ ) are not carried in stock and can be furnished only by shipment direct from factory.

# TAP AND REAMER TOOLS

## Tap Wrenches and Chucks GREENFIELD



Nos. M-336, M-337



T-Handle

Nos. M-328, M-329, M-332, M-333

Ratchet T-Handle

Nos. 338, 339

Crafted from steel carefully selected for its toughness. Chuck jaw all hardened and tempered, simple design, simple throughout, entirely free from delicate springs, pins, etc.

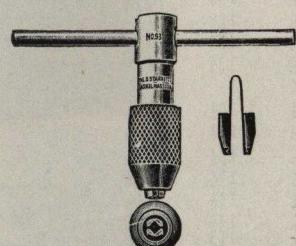
Wrenches Nos. M-328, M-332, M-338 and M-339 furnished with "Slip" handles, all other T-handle wrenches have tight or stationary handles. The "Slip" handles enable the user to rotate the wrench completely when working in close quarters where a rigid handle would not fit.

Nos.	Mfr's List, Each	Capacity (Tap Size)	Length, Hand, Inch	Mach. Screw	Inch	Each
M-328	± \$1.20	1/16 - 1/4	0-14	2 3/4	\$1.45	
M-329	.90	1/16 - 1/4	0-14	2 3/4	1.10	
M-332	± 1.75	7/32 - 1/2	12-14	3 5/8	2.10	
M-333	1.50	1/4 - 1/2	12-14	3 5/8	1.80	
M-336	2.00	1/16 - 1/4	0-14	8 3/4	2.40	
M-337	2.25	7/32 - 1/2	12-14	10 1/8	2.70	
M-338	2.75	1/16 - 1/4	0-14	4	3.30	
M-339	3.00	7/32 - 1/2	12-14	4 5/8	3.60	

## T-Handle Tap Wrenches

STARRETT

A tool valuable to toolmakers, machinists and motor mechanics. It is used for holding taps to be turned with the hand, and is also useful for holding drills, reamers and other small tools. The body is centered, enabling the workman to use it on lathe centers, or in an upright drilling machine to start the tap straight. Its unique construction permits the jaws to conform to the piece to be held, making it rigid and less apt to become loose. The jaws and the knurled clamping nuts are heat-treated to withstand any ordinary use. No. M-93C is made with sliding handle.



The D, E and F listing are identical in construction to A, B and C, except the body from knurled chuck nut to T-handle is proportionately longer. For machine, automobile service and airplane repair shops eliminating the expense of having on hand an endless lot of special long taps to work at depths where space does not permit of turning the handle.

Nos.	Each	Length Inches	Capacity Inches Square
M-93A	\$1.35	1 3/4	1/16 to 5/32
M-93B	1.75	2 1/8	5/32 to 1/4
M-93C	3.10	3 1/8	3/16 to 5/16
M-93D	± 2.40	6	1/16 to 5/32
M-93E	± 2.70	9 3/8	5/32 to 1/4
M-93F	± 4.10	12 7/8	3/16 to 5/16

One in a Box

## Adjustable Tap and Reamer Wrenches

GREENFIELD

Compact—Simple Design—Very Strong



Tool steel jaws are carefully hardened and tempered, unbreakable and stay in line. Wrenches 0 to 7 are solid steel drop forgings, practically unbreakable. Carefully polished, beautiful mottled finish on body.

Nos.	Mfr's List, Each	Capacity (Tap Size)		Pipe, In.	Cap'y Hand Reamers, Lgth., In. In. Each	
		Hand, In.	Machine Screw		In.	Each
M-00	\$2.25	1/16 - 1/4	0-14	—	1/8 - 17/64	5 \$2.75
M-0	2.75	1/16 - 1/4	0-14	—	1/8 - 21/64	7 3.25
M-4	3.75	1/16 - 3/8	0-14	—	1/8 - 25/64	9 4.25
M-5	4.50	5/32 - 1/2	7-14	1/8	11/64 - 7/16	11 5.00
M-6	5.00	5/32 - 3/4	7-14	1/8 - 1/4	11/64 - 41/64	15 5.50
M-7	6.25	1/4 - 1 1/8	—	1/8 - 3/4	5/32 - 29/32	19 6.75



The larger sizes, Nos. 7 1/2 to 24, have malleable iron bodies and steel tubing handles, yet light enough to handle easily.

Nos.	Mfr's List, Each	Capacity (Tap Size)		Pipe, In.	Cap'y Hand Reamers, Lgth., In. In. Each	
		Hand, In.	Machine Screw		In.	Each
M-7 1/2	\$10.00	1/2 - 1 1/8	—	1/8 - 1	3/8 - 1 1/2	31 \$10.75
M-8	14.25	3/4 - 1 1/8	—	3/8 - 1 1/4	3 3/4 - 1 1/2	40 13.20
M-22	± 18.75	1 - 2 1/2	—	3/4 - 2 1/2	7/8 - 2 1/2	54 24.75
M-24	± 40.00	1 1/4 - 4	—	1 1/2 - 4	1 1/8 - 3	72 41.25

## Tap Wrenches

STARRETT

Strong, Neat, Efficient

New Design with Tempered Gripping Surface



Will hold firmly a tap with square or round shank.

Nos.	Each	Holds Length, Inch	Taps, Inch	Fit Squares, Inch
M-91-A	\$1.75	5 1/4	1/8 to 1/4	1/8 to 1/4
M-91-B	2.50	9 1/4	1/2 to 1/4	1/2 to 1/4
M-91-C	± 4.75	12 1/8	1/4 to 5/8	1/8 to 1/4
M-91-D	± 6.00	16 1/4	5/8 to 3/4	1/4 to 1/4

Useful for Taps of Small Diameter



Of nicely finished steel. Holds taps, reamers, drills or any tool 1/4 inch and under. Grips round, square or oval shanks. 3 inches long. Six in a box.

M-174

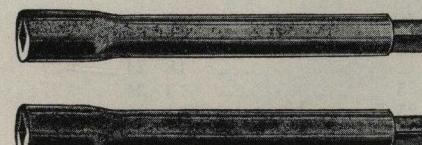
Standard List Each

Each \$1.25

## Tap Extensions

ALLEN

Handy Tool for Tool Crib



Set of two extensions in a wood box. One or both pieces may be used (making 10 inches in combination). Fits all standard taps from 1/4 to 1 inch. Square openings are cold drawn and conform to standards of leading manufacturers.

M-633

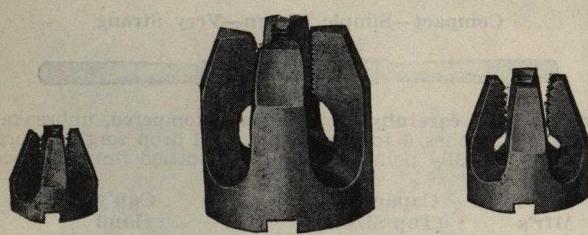
Tap Size	Mfr's List, Set of 2 Pieces	Size of Square of Tap Shank	Size of Hole in Tap Extension	Set of 2 Pieces
1/4	\$3.35	.191	.192	\$3.35
5/16	3.80	.238	.240	3.80
3/8	4.20	.286	.288	4.20
7/16	3.80	.342	.344	3.80
1/2	4.20	.375	.377	4.20
5/8	5.00	.360	.362	5.00
3/4	5.90	.442	.444	5.90
7/8	6.75	.523	.525	6.75
1	8.40	.600	.603	8.40

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

\* Goods marked thus (\*) are not carried in stock and can be furnished only by shipment direct from factory.

# GREENFIELD ACORN DIES

For High Speed Work—Ground for Steel or Brass



MACHINE SCREW SIZES  
M-390 Alloy Steel

Screw Gauge Nos.	Number of Die Blank—Each			Threads Per Inch		
	No. 0 $\frac{1}{8}$ " O. D.	No. 1 $\frac{1}{8}$ " O. D.	No. 2 $\frac{1}{8}$ " O. D.	NC	NF	NS
0	± \$3.75	± \$3.75	—	—	80	—
1	± 3.25	± 3.25	—	64	72	56
2	± 3.25	± 3.25	—	56	64	—
3	± 3.25	± 3.25	—	48	± 56	—
4	± 3.25	3.25	—	± 40	± 48	36
5	± 3.25	3.25	—	40	44	—
6	—	3.25	—	32	40	36
8	—	3.25	—	32	36	40
10	—	3.25	± \$4.25	24	32	30
12	—	3.25	4.25	24	28	—
14	—	3.25	4.25	—	—	20, 24
M-6390 High Speed Steel				—	—	—
2	\$5.00	—	—	± 56	± 64	—
3	5.00	—	—	± 48	± 56	—
4	5.00	—	—	± 40	± 48	± 36
5	5.00	—	—	40	± 44	—
6	5.00	—	—	32	± 40	—
8	5.00	—	—	32	± 36	—
10	5.00	± \$7.00	—	24	32	—
12	5.00	± 7.00	—	24	32	—
14	5.00	± 7.00	—	24	28	—

FRACTIONAL SIZES  
M-390 Alloy Steel

Cutting Size Ins.	No. 1 $\frac{1}{8}$ " O.D.	No. 2 $\frac{1}{8}$ " O.D.	No. 3 $\frac{1}{4}$ " O.D.	No. 4 $\frac{1}{4}$ " O.D.	No. 5 $\frac{5}{32}$ " O.D.	Threads Per Inch		
						NC	NF	NS
$\frac{1}{16}$	± \$3.25	—	—	—	—	—	64	—
$\frac{3}{32}$	± 3.25	—	—	—	—	—	48	—
$\frac{1}{8}$	3.25	—	—	—	—	—	40	—
$\frac{5}{32}$	± 3.25	—	—	—	—	—	32, 36	—
$\frac{3}{16}$	3.25	—	—	—	—	—	24, 32	—
$\frac{7}{32}$	± 3.25	—	—	—	—	—	24, 32	—
$\frac{1}{4}$	± 3.25	± \$4.25	—	—	—	20	28	24, 32
$\frac{5}{16}$	± 4.25	—	—	—	—	18	24	32
$\frac{3}{8}$	± 4.25	± \$5.50	—	—	—	16	24	—
$\frac{7}{16}$	± 4.25	± 5.50	—	—	—	14	20	—
$\frac{1}{2}$	—	± 5.50	—	—	—	13	20	—
$\frac{9}{16}$	—	± 5.50	—	—	—	12	18	—
$\frac{5}{8}$	—	± 5.50	± \$8.00	—	—	11	18	—
$\frac{3}{4}$	—	—	± 8.00	—	—	10	16	—
$\frac{7}{8}$	—	—	± 8.00	—	—	9	14	—
1	—	—	± 8.00	—	—	8	14	—
$1\frac{1}{8}$	—	—	± 8.00	—	—	—	—	—
M-6390 High Speed Steel						20	28	± 27
$\frac{1}{4}$	\$5.00	\$7.00	—	—	—	18	24	± 27
$\frac{5}{16}$	—	7.00	—	—	—	16	24	± 27
$\frac{3}{8}$	—	7.00	\$8.25	—	—	14	20	± 27
$\frac{7}{16}$	—	—	8.25	—	—	13	20	± 27
$\frac{1}{2}$	—	—	8.25	—	—	12	18	± 27
$\frac{9}{16}$	—	—	8.25	—	—	11	18	± 27
$\frac{5}{8}$	—	—	8.25	\$14.00	—	10	16	± 27
$\frac{3}{4}$	—	—	—	14.00	—	9	14	± 27
$\frac{7}{8}$	—	—	—	14.00	—	8	14	± 27
1	—	—	—	—	± 20.00	7	12	—
$1\frac{1}{8}$	—	—	—	—	± 20.00	7	12	—
$1\frac{1}{4}$	—	—	—	—	± 20.00	7	12	—
$1\frac{3}{8}$	—	—	—	—	± 20.00	—	12	—
$1\frac{1}{2}$	—	—	—	—	± 20.00	—	12	—

The maximum size for each die blank we list in the table above are the largest sizes we recommend for these blanks. Coarser pitches than those shown for the maximum sizes for each die blank are also not recommended.

Simple — compact — capable of unusually fine adjustment — easy to resharpen. Ample oil reaches the die freely through special holder construction. Wide slots in cap give provision for chip clearance under all conditions. Three different types of holders furnished. With proper type the die can be used on all makes of hand or automatic screw machines, turret lathes, bolt cutters, drill presses, etc. It functions equally well on fixed or rotating spindles.

High speed steel dies furnished at regular prices only in pitches listed. All left-hand dies subject to special prices. Dies for threading up to 3-inch fractional sizes and 2-inch pipe can be supplied. Prices on application.

Die blank numbers correspond to terminal numbers of holders.

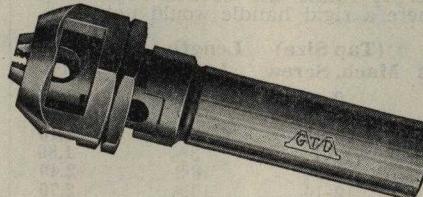
When ordering give the following information:

1. Cutting size and pitch
2. Number of die blank
3. Kind of metal to be threaded
4. If die is to cut close to shoulder

PIPE SIZES  
M-390 Alloy Steel

Cutting Size Pipe, In.	No. of Die Blank — Each				Threads per In. American Nat'l Standard Taper (NPT) or Straight (NPS)
	No. 2	No. 3	No. 4	No. 5	
$\frac{1}{8}$	± \$5.00	± \$6.25	—	—	27
$\frac{1}{4}$	—	± 6.25	—	—	18
$\frac{3}{8}$	—	± 6.25	± \$10.00	—	18
$\frac{1}{2}$	—	—	± 10.00	—	14
$\frac{3}{4}$	—	—	± 10.00	—	14
1	—	—	—	± \$17.00	11 $\frac{1}{2}$
M-6390 High Speed Steel				—	—
$\frac{1}{8}$	\$7.50	\$9.00	—	—	27
$\frac{1}{4}$	—	9.00	—	—	18
$\frac{3}{8}$	—	9.00	± \$16.00	—	18
$\frac{1}{2}$	—	—	16.00	—	14
$\frac{3}{4}$	—	—	16.00	—	14
1	—	—	—	± \$22.00	11 $\frac{1}{2}$

## Regular "Acorn" Die Holders For Automatic Screw Machines



Designed for use on automatic screw, and other machines which provide for automatically reversing the die or rod at the instant the desired length of thread has been cut. Body fitted with longitudinal "float" which allows the die to follow its own lead independent of any lag in the machine.

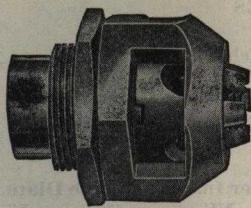
No. of Holder	Mfr's List, Each	Diam. Shank, No. of Die	Lgth. Shank, In.	Lgth. Body, In.	Lgth. Will Cut, In.
M-710A	± \$20.00	0 $\frac{1}{8}$	1 $\frac{3}{4}$	1 $\frac{3}{32}$	$\frac{7}{8}$
M-710B	± 20.00	0 $\frac{1}{8}$	2	1 $\frac{3}{32}$	$\frac{7}{8}$
M-710C	± 20.00	0 $\frac{3}{4}$	2 $\frac{1}{2}$	1 $\frac{3}{32}$	$\frac{7}{8}$
M-711A	18.00	1 $\frac{5}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{32}$	1
M-711B	18.00	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{32}$	1
M-711C	18.00	1 $\frac{3}{4}$	2 $\frac{3}{8}$	1 $\frac{3}{32}$	1
M-711D*	± 18.00	1 $\frac{5}{8}$	1 $\frac{1}{8}$	1	$\frac{1}{8}$
M-712A	20.00	2 $\frac{5}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{32}$	1 $\frac{3}{8}$
M-712B	20.00	2 $\frac{3}{4}$	1 $\frac{1}{4}$	1 $\frac{3}{32}$	1 $\frac{3}{8}$
M-712C	± 20.00	2 $\frac{7}{8}$	2 $\frac{3}{4}$	1 $\frac{3}{32}$	1 $\frac{3}{8}$
M-712D	20.00	2 1	2 $\frac{3}{4}$	1 $\frac{3}{32}$	1 $\frac{3}{8}$
M-712E	± 20.00	2 1	3 $\frac{3}{4}$	1 $\frac{3}{32}$	1 $\frac{3}{8}$
M-712F*	± 20.00	2 $\frac{5}{8}$	1 $\frac{1}{8}$	1 $\frac{3}{32}$	1 $\frac{1}{8}$
M-712G*	± 20.00	2 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{32}$	1 $\frac{1}{8}$
M-712H*	± 20.00	2 1	2	1 $\frac{3}{32}$	1 $\frac{1}{8}$
M-713A	25.00	3 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{32}$	2
M-713B	25.00	3 1	2 $\frac{1}{2}$	2 $\frac{1}{32}$	2
M-713C	25.00	3 1	3 $\frac{7}{8}$	2 $\frac{1}{32}$	2
M-713D	25.00	3 1 $\frac{1}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{32}$	2
M-713E	25.00	3 1 $\frac{1}{4}$	3 $\frac{7}{8}$	2 $\frac{1}{32}$	2
M-713F*	25.00	3 $\frac{3}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{32}$	1 $\frac{1}{2}$
M-713G*	25.00	3 1	2	2 $\frac{1}{32}$	1 $\frac{1}{2}$
M-714A	± 38.00	4 1	2 $\frac{1}{8}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714B	38.00	4 1 $\frac{1}{4}$	2 $\frac{7}{8}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714C	38.00	4 1 $\frac{1}{4}$	4 $\frac{1}{2}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714D	38.00	4 1 $\frac{1}{2}$	2 $\frac{7}{8}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714E	38.00	4 1 $\frac{1}{2}$	4 $\frac{1}{2}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714F	38.00	4 1	3 $\frac{7}{8}$	3 $\frac{23}{32}$	2 $\frac{1}{4}$
M-714G*	38.00	4 1	2	3 $\frac{1}{32}$	2
M-715A	± 60.00	5 2	3 $\frac{1}{4}$	4 $\frac{5}{8}$	2 $\frac{1}{2}$
M-715B	60.00	5 1 $\frac{1}{2}$	3 $\frac{1}{4}$	4 $\frac{5}{8}$	2 $\frac{1}{2}$

\* Short Body Type.

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.  
† Goods marked thus (†) are not carried in stock and can be furnished only by shipment direct from factory.

### Acorn Die Adapters

GREENFIELD



Adapter permits use of acorn dies with button, spring or floating holders. Also used in hand die stocks when acorn die is used for hand sizing operations. Complete with three parts—a cap to hold and adjust the die, a lock-nut to secure the adjustment, and a body. Shank fits round or spring die holders of corresponding size.

Hollow body and shank to permit the cutting of any length thread within the capacity of the machine.

Adapter Nos.	Each	Number of Die	Diam. Shank, In.	Length Shank, In.
M-780	+\$13.00	0	5/8	1/4
M-781-A	12.00	1	5/8	1/4
M-781-B	12.00	1	1 1/8	1/4
M-781-C	12.00	1	1	3/8
M-781-D	+\$12.00	1	1 1/2	1/2
M-782-A	13.00	2	1 1/8	1/4
M-782-B	13.00	2	1	3/8
M-782-C	+\$13.00	2	1 1/8	1/4
M-782-D	13.00	2	1 1/2	1/2
M-782-E	+\$13.00	2	1 1/8	1/4
M-783-A	16.00	3	1 1/8	1/4
M-783-B	+\$16.00	3	1 1/2	1/2
M-783-C	+\$16.00	3	1 1/8	1/4
M-783-D	16.00	3	2	5/8
M-783-E	+\$16.00	3	1 3/4	1/4
M-784-A	25.00	4	2	5/8
M-784-B	+\$25.00	4	2 1/4	3/4
M-785	+\$45.00	5	3	1

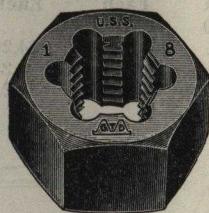
### Solid Hexagon Re-Threading Dies

Carbon Steel

Used only for repair work, for dressing over bruised or rusty threads.

Hexagon rethreading dies furnished with American National or Whitworth form of thread at regular prices.

Sizes and dimensions not listed are special.  
Left-hand dies are special.



### BOLT SIZES No. M-377

Size, In.	Mfr's List, Each	Number of Threads to In.			Size of Die, In. Across Flats	Thickness
		NC	NF	NS		
1/4	\$0.90	20	28	---	1 1/2	1/4
5/16	1.00	18	24	---	1 1/8	1/8
3/8	1.10	16	24	---	2 1/8	3/8
7/16	1.20	14	20	---	2 1/8	1/4
1/2	1.30	13	20	---	2 1/8	1/2
9/16	1.40	+\$12	+\$18	---	2 1/8	1/2
5/8	1.60	11	18	---	2 1/8	5/8
11/16	1.80	---	+\$11, 16	---	2 1/8	3/4
3/4	2.10	10	16	---	2 1/8	3/4
7/8	2.40	9	14	---	2 1/8	7/8
1	2.70	8	14	---	2 1/8	1
1 1/8	3.20	7	+\$12	---	2	1
1 1/4	3.70	7	+\$12	---	2 1/8	1
1 1/2	4.20	6	+\$12	---	2 1/8	1
1 1/2	4.70	6	+\$12	---	2 1/8	1

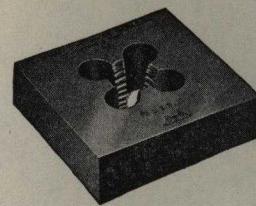
### PIPE SIZES

No. M-377

Size Ins.	Mfr's List, Each	Threads Per Inch, N.P.T.	Dimensions, Inches, Across Flats			Thickness
			1 1/16	1 1/4	5/8	
1/8	\$1.30	27	1 1/16	---	5/8	
1/4	1.40	18	1 1/4	---	5/8	
3/8	1.80	18	1 1/16	---	5/8	
1/2	2.40	14	1 1/8	---	5/8	
5/8	3.20	14	2	---	1 1/16	
1	4.20	11 1/2	2 1/8	---	1	

### Solid Square Bolt Dies

GREENFIELD



Carbon Steel

Furnished with National form of thread. Sizes and dimensions not listed are special. High speed steel and left-hand dies are special.

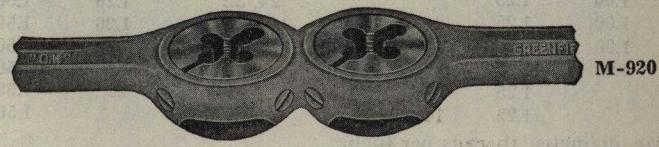
No. M-275

Cutting Size, In.	Threads Per Inch, N.C. (U.S.S.)	Threads Per Inch, N.S. (U.S.F.)	Square, In.	Thickness, In.
1/4	\$2.25	20	-----	2 1/2
5/16	2.40	18	-----	2 1/2
3/8	2.50	16	-----	2 1/2
7/16	2.65	14	-----	2 1/2
1/2	3.00	13	-----	2 1/2
9/16	3.15	12	-----	2 1/2
5/8	3.25	11	-----	2 1/2
3/4	3.50	10	-----	2 1/2
7/8	3.75	9	-----	2 1/2
1	4.25	8	-----	2 1/2
1 1/8	4.75	7	-----	2 1/2
1 1/4	5.25	7	-----	2 1/2
1 3/8	5.75	6	-----	2 1/2
1 1/2	6.25	6	-----	3
1 5/8	7.00	-----	5 1/2	1
1 3/4	8.00	5	-----	3
1 7/8	12.00	5	-----	3 1/2
2	16.00	4 1/2	-----	3 3/4

Specify Size, Threads Per Inch

### Pump Makers' Stocks and Dies

"O. K." JUNIOR



M-920



M-921, M-922, and M-923

With "O. K." Jr. Adjustable Round Split Dies—1 1/2 Inch Outside Diameter  
Used in pump installation and repair work to thread the ends of pump rods ready for the couplings.

Convenient double type stock especially where two cutting sizes are in constant use. Solid guides forged integral with the stock. Dies, one set in the stock, are always instantly available for work on rods of their respective sizes.

The single type stock is priced a little higher than the double type—equipped with an adjustable guide which permits the use of any 1 1/2 inch outside diameter die, regardless of cutting size. Adjustable guide, facilitates starting of the die onto the work, insures straight threads. Can be set instantly to fit any size rod within its range by simply turning the cam plate and locking it in place by set screws.

Regularly furnished in V form of thread, 1/2 inch oversize. National form threads furnished at regular prices if specified.

Each double stock is furnished with two 1 1/2 inch O.D. "O. K." JR. adjustable round split dies, adjusted ready for use.

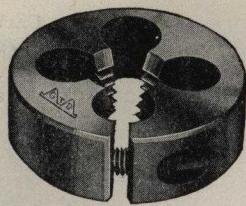
Each single stock is furnished with one 1 1/2 inch O.D. "O. K." JR. adjustable round split die, adjusted ready for use.

Set Nos.	Price Stock, Complete With Dies, Each	Price, Stock Only, Each	Price, Dies Only, Each	Style	Cutting Sizes	Threads Per Stock, Inch	Length of Stock, Inches
M-920	\$6.75	+\$2.75	+\$2.00	Double	5/8 1 1/2	14	14 3/4
M-921	5.50	+\$3.50	+\$2.00	Single	3/8 1 1/2	12	17 3/4
M-922	5.50	+\$3.50	+\$2.00	Single	7/16 1 1/2	12	17 3/4
M-923	5.50	+\$3.50	+\$2.00	Single	1/2 1 1/2	12	17 3/4

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

\* Goods marked thus (\$) are not carried in stock and can be furnished only by shipment direct from factory.

# GREENFIELD ADJUSTABLE ROUND SPLIT OR BUTTON DIES



M-382

**SCREW ADJUSTING TYPE**

Adjustment of No. M-382 screw type is obtained by a fine pitch screw which forces sides of split die apart or allows them to spring together. Adjustment remains positive when die is removed from machine holder or from hand stock so die may be used again without making new adjustment.

Beveled slot in dies so that when the dies are used in a machine holder adjusting screw can be removed if necessary and adjustment made by the adjusting screw in the holder.

Special prices—high speed dies—left hand dies—sizes, dimensions and threads not listed. Specify type of die wanted in ordering.

**FRACTIONAL SIZES**

## Carbon Steel

1 $\frac{3}{16}$  Inch Outside Diameter,  $\frac{1}{4}$  Inch Thick1 Inch Outside Diameter,  $\frac{3}{8}$  Inch Thick

Furnished with American National form of thread at regular prices. Wherever possible the substitution of machine screw sizes is recommended for sizes smaller than  $\frac{1}{4}$  inch diameter.

**SIZES AND PRICES**

Cutting Size, In.	Outside Diam.		Threads Per Inch			Outside Diam.		
	Mfr's List, Each	1 $\frac{3}{16}$ "	1"	NC	NF	NS	1 $\frac{3}{16}$ "	1"
$\frac{1}{16}$	± \$1.50	—	—	—	—	64	\$1.75	—
$\frac{3}{32}$	± 1.15	—	—	—	—	48	1.40	—
$\frac{1}{8}$	1.00	\$1.25	—	—	—	40	1.20	\$1.50
$\frac{5}{32}$	1.00	1.25	—	—	—	32, 36	1.20	1.50
$\frac{3}{16}$	1.00	1.25	—	—	—	24, 32	1.20	1.50
$\frac{7}{32}$	1.00	1.25	—	—	—	24, ± 32	1.20	1.50
$\frac{1}{4}$	1.00	1.25	20	28	—	± 24, 32	1.20	1.50
$\frac{5}{16}$	1.00	1.25	18	24	—	32	1.20	1.50
$\frac{3}{8}$	—	1.25	16	24	—	—	—	1.50
$\frac{7}{16}$	—	1.25	14	20	—	—	—	1.50

Specify size, diameter, threads per inch.

1 $\frac{5}{16}$  Inch Outside Diameter,  $\frac{7}{16}$  Inch Thick1 $\frac{1}{2}$  Inch Outside Diameter,  $\frac{1}{4}$  Inch Thick2 Inch Outside Diameter,  $\frac{3}{8}$  Inch Thick

Cutting Size, In.	Outside Diam.		Threads Per Inch			Outside Diam.				
	Mfr's List, Each	1 $\frac{3}{16}$ "	1 $\frac{1}{2}$ "	2"	NC	NF	NS	1 $\frac{3}{16}$ "	1 $\frac{1}{2}$ "	2"
$\frac{1}{4}$	± \$2.00	\$2.00	\$5.00	20	28	—	± 24, 32	\$2.45	\$2.45	\$6.00
$\frac{5}{16}$	± 2.00	2.00	5.00	18	24	—	± 32	2.45	2.45	6.00
$\frac{3}{8}$	± 2.00	2.00	5.00	16	24	—	—	2.45	2.45	6.00
$\frac{7}{16}$	± 2.00	2.00	5.00	14	20	—	—	2.45	2.45	6.00
$\frac{1}{2}$	± 2.00	2.00	5.00	13	20	—	—	2.45	2.45	6.00
$\frac{9}{16}$	—	2.00	5.00	12	18	—	—	2.45	2.45	6.00
$\frac{5}{8}$	—	2.00	5.00	11	18	—	—	2.45	2.45	6.00
$\frac{11}{16}$	—	2.00	± 5.00	—	—	11, 16	—	—	—	6.00
$\frac{3}{4}$	—	—	5.00	10	16	—	—	—	—	6.00
$\frac{7}{8}$	—	—	5.00	9	14	—	—	—	—	6.00

Specify size, diameter, threads per inch.

2 $\frac{1}{2}$  Inch Outside Diameter,  $\frac{3}{4}$  Inch Thick

3 Inch Outside Diameter, 1 Inch Thick

Cutting Size, In.	Outside Diam.		Threads Per Inch			Outside Diam.		
	Mfr's List, Each	2 $\frac{1}{2}$ "	3"	NC	NF	NS	2 $\frac{1}{2}$ "	3"
$\frac{1}{2}$	± \$5.00	—	—	13	20	—	\$6.00	—
$\frac{9}{16}$	± 5.00	—	—	12	18	—	6.00	—
$\frac{5}{8}$	± 5.00	—	—	11	18	—	6.00	—
$\frac{11}{16}$	± 5.00	—	—	—	—	11, 16	6.00	—
$\frac{3}{4}$	± 5.00	—	—	10	16	—	6.00	—
$\frac{7}{8}$	± 5.00	± \$10.00	—	9	14	—	6.00	\$12.00
1	± 5.00	—	—	10	16	—	6.00	12.00
$1\frac{1}{8}$	—	—	—	10	16	—	—	12.00
$1\frac{1}{4}$	—	—	—	10	16	—	—	12.00
$1\frac{1}{8}$	—	—	—	10	16	—	—	12.00
$1\frac{1}{2}$	—	—	—	10	16	—	—	12.00

Specify size, diameter, threads per inch.

**MACHINE SCREW SIZES**

## Carbon Steel

$\frac{5}{8}$  Inch Outside Diameter,  $\frac{1}{4}$  Inch Thick  
 $\frac{13}{16}$  Inch Outside Diameter,  $\frac{1}{4}$  Inch Thick  
 1 Inch Outside Diameter,  $\frac{3}{8}$  Inch Thick

These dies are furnished with American National form of thread.

Screw Nos.	Outside Diam. Mfr's List, Each	Outside Diam. 1 $\frac{3}{16}$ " 1"	Basic Outside Diam., Threads Per In.				Outside Diam. 1 $\frac{3}{16}$ " 1"
			In.	NC	NF	NS	
0	\$1.30	—	.060	—	80	—	\$1.65
1	1.30	—	.073	64	72	56	1.65
2	1.15	—	.086	56	64	—	1.40
3	1.00	—	.099	48	56	—	1.20
4	.90	—	.112	40	48	32, 36	1.10
5	.90	—	.125	40	44	—	1.10
6	.90	\$1.25	.138	32	40	36	1.10
8	.90	1.25	.164	32	36	40	1.10
10	.90	1.25	.190	24	32	30	1.10
12	.90	1.25	.216	24	28	32	1.10
14	.90	1.25	.242	—	—	20, 24	1.10
							1.50

**PIPE SIZES**

## Carbon Steel

1 Inch Outside Diameter,  $\frac{3}{8}$  Inch Thick1 $\frac{1}{2}$  Inch Outside Diameter,  $\frac{1}{2}$  Inch Thick2 Inch Outside Diameter,  $\frac{3}{8}$  Inch Thick

Furnished with American National taper pipe threads. Diameter of thread at small end is such that the American National pipe plug gauges screws flush with the face of die. Sizes marked with star (\*) are thick enough to cut a true American National pipe form of thread with approximately three imperfect threads.

Pipe dies with American National straight pipe threads are special.

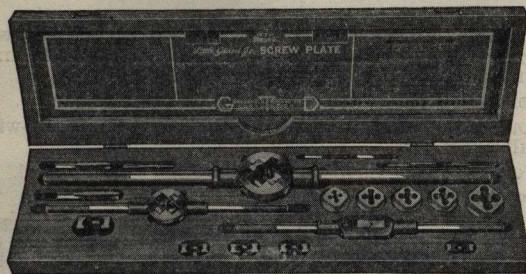
Cutting Size, In.	Threads Per Inch			Outside Diameter			
	1"	1 $\frac{1}{2}$ "	2"	American Standard	1"	1 $\frac{1}{2}$ "	2"
$\frac{1}{8}$	*\$1.25	*\$2.00	\$—	27	\$1.50	\$2.45	—
$\frac{1}{4}$	—	2.00	± *3.50	18	—	2.45	\$4.25
$\frac{3}{8}$	—	2.50	± *3.50	18	—	—	4.25
$\frac{1}{2}$	—	3.50	14	—	—	2.95	4.25

Specify size, diameter, threads per inch.

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

# Goods marked thus (#) are not carried in stock and can be furnished only by shipment direct from factory.

# Little Giant, Jr. Combination Screw Plates

**AUTOMOBILE AND OTHER FINE THREAD PURPOSES**

**National Coarse and National Fine Threads**

Set Nos.	M-3310	M-3311	M-3312
Thread Standard.....	NC NF	NC NF	NC NF
	1/4-20 1/4-28	1/4-20 1/4-28	1/4-20 1/4-28
	5/16-18 5/16-24	5/16-18 5/16-24	5/16-18 5/16-24
	5/8-16 5/8-24	5/8-16 5/8-24	5/8-16 5/8-24
	7/16-14 7/16-20	7/16-14 7/16-20	7/16-14 7/16-20
One Hand Tap and one "Little Giant" Die with Die Clip and one Guide for each size.	1/2-13 1/2-20	1/2-13 1/2-20	1/2-13 1/2-20
	5/8-12 5/8-18	5/8-12 5/8-18	5/8-12 5/8-18
	5/8-11 5/8-18	5/8-11 5/8-18	5/8-11 5/8-18
	3/4-10 3/4-16	3/4-10 3/4-16	3/4-10 3/4-16
		7/8-9 7/8-14	
		1-8 1-14	
Stock Nos. ....	31	31, 35	31, 35A
Length, Inches.....	14	14, 23	14, 26
Tap Wrench Nos. ....	5	6	5, 7
Mfr's List, Per Set. ....	± \$31.00	± \$57.50	± \$83.00
Per Set. ....	31.00	57.50	83.00

**NC Threads Furnished Unless Otherwise Ordered**

Set Nos.	M-301	M-305	M-307
Thread Standard.....	NC	NC	NC
	1/4-20	1/4-20	1/4-20
	5/16-18	5/16-18	5/16-18
	5/8-16	5/8-16	5/8-16
	7/16-14	7/16-14	7/16-14
One Hand Tap, one "Little Giant" Die with Die Clip and one Guide for each cutting size.....	1/2-13	1/2-13	1/2-13
	5/8-11	5/8-11	5/8-11
	3/4-10	3/4-10	3/4-10
		7/8-9	
		1-8	
Stock Nos. ....	31	31, 35	31, 35A
Length, Inches.....	14	14, 23	14, 26
Tap Wrench Nos. ....	5	6	5, 7
Mfr's List, Per Set. ....	± \$21.50	± \$35.00	± \$53.50
Per Set. ....	21.50	35.00	53.50

**AUTOMOBILE AND OTHER FINE THREAD PURPOSES**
**National Fine Threads, Used on American-Made Automobiles**

Set Nos.	M-331	M-335	M-337
Thread Standard.....	NF	NF	NF
	1/4-28	1/4-28	1/4-28
	5/16-24	5/16-24	5/16-24
	5/8-24	5/8-24	5/8-24
	7/16-20	7/16-20	7/16-20
One Hand Tap, one "Little Giant" Die with Die Clip and one Guide for each cutting size.....	1/2-20	1/2-20	1/2-20
	5/8-18	5/8-18	5/8-18
	3/4-16	3/4-16	3/4-16
	7/8-14	7/8-14	7/8-14
	1-14	1-14	1-14
Stock Nos. ....	31	31, 35	31, 35A
Length, Inches.....	14	14, 23	14, 26
Tap Wrench Nos. ....	5	6	5, 7
Mfr's List, Per Set. ....	± \$21.50	± \$35.00	± \$53.50
Per Set. ....	21.50	35.00	53.50

Popular priced . . . but of the same high quality as other Greenfield products!

This sensational value is made possible by redesigning and simplifying a number of tools in the sets—namely, the simpler and less expensive O. K. Jr. taps.

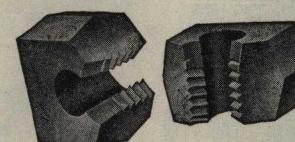
Stock—Malleable iron red-enamed body with three adjusting screws and polished steel handles.

Tap wrench—drop forged solid steel, polished finish, with two-screw adjustments.

Dies—round split pattern  $\frac{1}{8}$  inch in diameter.

Taps—carbon steel.

Includes small screw driver for turning screws in stock.

**Little Giant and Little Giant Jr. Adjustable Dies**
**Two-Piece for Easy Sharpening — Easy Adjusting**


Held in a "Little Giant" collet, consisting of a cap and a screw guide. To avoid error, specify outside diameter of the collet for which you are ordering dies, cutting size, and number of threads per inch.

Sizes, dimensions and threads not listed are subject to special prices. Left-hand dies are special.

High speed steel dies are special.

**M-380**
**MACHINE SCREW SIZES**
**Sizes and Prices**

Diameter collet  $1\frac{1}{4}$  inches.

Screw Gage Nos.	Mfr's List, Each	No. of Threads to Inch			Each
		NC	NF	NS	
2	± \$1.80	56	64	—	2.15
3	± 1.80	48	56	—	2.15
4	± 1.80	40	48	32, 36	2.15
5	± 1.80	40	44	—	2.15
6	± 1.80	32	40	36	2.15
8	± 1.80	32	36	40	2.15
10	± 1.80	24	32	30	2.15
12	± 1.80	24	28	32	2.15
14	± 1.80	—	—	20, 24	2.15

**M-380  
FRACTIONAL SIZES**

National coarse thread furnished unless otherwise specified.

Left-hand dies furnished NC and NF pitches in sizes  $\frac{1}{4}$  inch to  $1\frac{1}{4}$  inches, inclusive, at regular prices.

**Collet Diameter, Inches**

Cutting Size, In.	Mfr's List, Each	*2, 2 $\frac{3}{4}$ , 4, 4 $\frac{1}{2}$			No. of Threads to Inch
		Mfr's List, Each	Mfr's List, Each	Mfr's List, Each	
$\frac{1}{16}$	± \$1.80	\$2.15	—	—	—
$\frac{3}{32}$	± 1.80	2.15	—	—	48
$\frac{1}{8}$	± 1.80	2.15	—	—	40
$\frac{5}{32}$	± 1.80	2.15	—	—	32, 36
$\frac{3}{16}$	± 1.80	2.15	± \$1.80	\$2.15	—
$\frac{7}{32}$	± 1.80	2.15	± 1.80	2.15	24, 32
$\frac{1}{4}$	± 1.80	2.15	1.80	2.15	24, 32
$\frac{5}{16}$	—	1.80	2.15	18	24, ± 32
$\frac{3}{8}$	—	2.20	2.65	16	24
$\frac{7}{16}$	—	2.20	2.65	14	20
$\frac{1}{2}$	—	2.60	3.15	13	20
$\frac{9}{16}$	—	2.60	3.15	12	18
$\frac{5}{8}$	—	3.00	3.60	11	18
$\frac{11}{16}$	—	3.00	3.60	—	± 11, ± 16
$\frac{3}{4}$	—	3.40	4.10	10	16
$\frac{7}{8}$	—	4.80	5.75	9	14
1	—	4.80	5.75	8	14
$1\frac{1}{8}$	—	6.80	8.15	7	± 12
$1\frac{1}{4}$	—	6.80	8.15	7	± 12
$1\frac{3}{8}$	—	8.80	8.15	6	± 12
$1\frac{1}{2}$	—	8.80	8.15	6	± 12

"Little Giant" Pump Rod Dies  $\frac{3}{8}$ -14,  $\frac{7}{16}$ -12 and  $\frac{1}{2}$ -12 V-form  $\frac{1}{2}$ -inch oversize, for use in regular collets or with bit brace shank guide can be furnished at regular prices of "Little Giant" Dies of corresponding size.

\*2" Diam. collets, sizes  $\frac{1}{8}$ "— $\frac{1}{2}$ ". 4" Diam. collets, sizes  $\frac{5}{8}$ "— $1\frac{1}{4}$ ".

$2\frac{3}{4}$ " Diam. collets, sizes  $\frac{1}{8}$ "— $\frac{1}{2}$ ".  $4\frac{1}{2}$ " Diam. collets, sizes  $\frac{7}{8}$ "— $1\frac{1}{2}$ ".

# Repair Parts for Little Giant and Little Giant Jr. Screw Plates

## Little Giant Stocks for Screw Plates



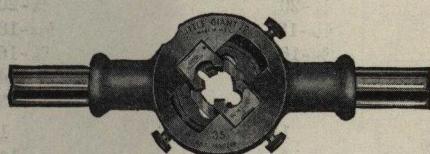
Carefully made—handsomely finished. The body of each stock has a beautiful mottled and polished finish and the handles are polished with knurling on the ends so that greasy or oily hands can take a sure grip.

Used in all "Little Giant" screw plates except full mounted. In each of these assortments one stock accommodates all the collets of the same outside diameter. Screw plates with two sizes of collets require two corresponding stocks.

Stocks can be furnished complete with die and collet, making a complete equipment for cutting any one size of thread.

Stock Nos.	Mfr's List, Each	Diameter Ins.	Stock Length, In.	Each
M-A1	± \$2.50	1 1/4	7 1/2	\$3.00
M-1	4.25	2	14 1/2	5.10
M-5	6.00	2 3/4	23	7.20
M-5A	6.00	2 3/4	26	7.20
M-5B	± 6.00	2 3/4	29	7.20
M-20	± 12.00	4	41	14.40
M-25	± 15.00	4 1/2	52	18.00

## Little Giant Jr. Stocks



Double slot feature permits use of several different cutting size dies as indicated in the table below. While the stock is in use, the empty slot provides plenty of clip room and lubrication space.

Thumb screws at both ends of the slots are for marks on the face of the stock assures accurate adjustment of the dies.

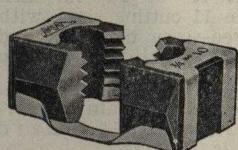
We recommend the use of our patented cadmium-plated die clips with "Little Giant" Dies in these stocks. Since the dies fit directly into the slots in the stocks and are held in place by a screw guide, no collets are required to hold the dies, and use of the clips permits handling the die halves as a single unit when changing from one size to another. The clips also prevent separation and consequent danger of loss or mismatching the die halves when out of the stock.

Nos. of Stock	Stock Complete With One Guide		Range of Cutting Length			Guides		
	Mfr's List, Each	Each	Sizes, In.	Stock, In.	Mfr's List, Each	Each	Each	Each
M-31	\$2.30	\$4.50	1/4 to 1/2	14	\$0.50	\$0.60		
M-35	3.50	6.85	1/8 to 1	23	.85	1.00		

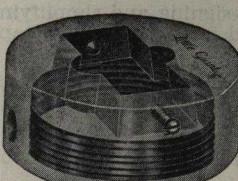
## Die Clips

This new patented die clip, one of which is furnished for each size in the Little Giant Jr. screw plate, holds the two halves of the "Little Giant" die as a single unit. It facilitates handling—inserting and removing die from stock—keeps die halves from becoming separated and lost. All clips, which have a cadmium-plated, rust-proof finish, are made from high-quality spring-tempered steel, for strength and flexibility. Specify size of die.

Die Clip Only Mfrs. List ± \$0.25, Each \$0.50



## Little Giant Collets



Cap (Phantom View)



Guide



Collet, Complete

This table of standard sizes shows in detail the range of sizes for each collet.

In ordering extra collets or guides, it is only necessary to give us the outside diameter of the collet and the cutting size of the die for which it is required.

## STANDARD SIZES

Collet Nos.	Outside Diam., In.	Fractional		Take Cutting Sizes Machine Screw
		Cap	Guide	
M-A1	1 1/4		1/8 - 1/4	2-14
M-1	2		1/8 - 1/2	-----
M-5	2 3/4		1/8 - 1	-----
M-20	4		1/2 - 1 1/4	-----
M-25	4 1/2		5/8 - 1 1/2	-----

Collet	Mfr's List, Nos. Each	Cap Mfr's List, Each	Guide Mfr's List, Each	Collet Complete Mfr's List, Each		In.
				Stock, In.	Each	
M-A1	± \$0.80	\$0.95	± \$0.35	\$0.40	± \$1.15	\$1.40
M-1	± 1.10	1.30	.50	.60	1.60	1.90
M-5	± 1.75	2.10	.85	1.00	2.60	3.15
M-20	± 4.00	4.80	± 1.25	1.50	± 5.25	6.30
M-25	± 5.00	6.00	± 1.75	2.10	± 6.75	8.10

Save Needless Wear and Tear

on Your

Industrial Machinery With

LINCOLN LUBRICATING  
EQUIPMENT

### Greenfield O. K. Jr. Round Die Screw Plates

Cut Clean, Accurate, Easy-action Threads That Assure Secure, Tight Connections.  
Popular priced . . . but of the same high quality as other Greenfield products.

This sensational value is made possible by re-designing and simplifying a number of tools in the sets—namely, the simpler and less expensive O. K. Jr. round split dies, which are held and adjusted in the stock by 3 tapered screws, and the O. K. Jr. taps.

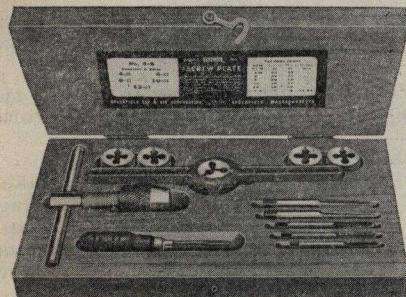
Stock—malleable iron red-enamored body with 3 adjusting screws and polished steel handles.

Tap wrench—drop forged solid steel, polished finish, with 2-screw adjustments.

Dies—round split pattern.

Taps—carbon steel.

Each set includes one or more screw drivers for turning screws in stock.



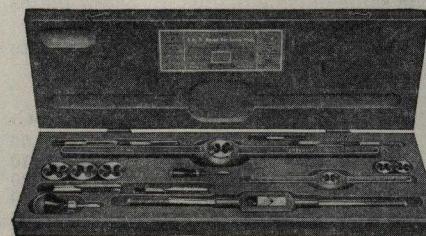
Machine Screw Sizes  $\frac{13}{16}$   
Inch Diameter  
Right Hand Threads

Set Nos.	M-B5	M-B7	M-B8	M-B10
Cutting Sizes	4-36	4-36	0-80	
			1-72	
			2-56	
			3-48	
			4-40	4-40
			4-48	
			6-32	6-32
			6-32	6-40
			8-32	8-32
			8-32	8-36
Dies, Diam., Ins.	10-24	10-24	10-24	
			10-32	10-32
			12-24	12-24
			1/4-20	12-28
			1/8-16	
Stock Nos.	13	13	13	13
Length Ins.	6 1/4	6 1/4	6 1/4	6 1/4
Tap Wrench Nos.	329	329	329	329
Mfr's List Per Set	\$11.00	\$13.50	\$16.50	\$17.00
Per Set	\$11.00	\$13.50	\$16.50	\$17.00

#### Fractional Sizes, $\frac{13}{16}$ Inch Diameter

National form threads furnished unless otherwise specified.

Set Nos.	M-BB5	M-BB7
Cutting Sizes	1/8-40	1/16-64
		5/32-48
		1/8-40
		5/32-36
		5/32-36
		3/16-24
		3/16-24
		7/32-24
		7/32-24
		1/4-20
Dies, Diam., Ins.	13	13
Stock Nos.	13	13
Length Ins.	6 1/4	6 1/4
Tap Wrench Nos.	329	329
Mfr's List Per Set	\$11.00	\$14.50
Per Set	\$11.00	\$14.50



National form threads furnished unless otherwise specified.

Set Nos.	M-C5	M-C7
Cutting Sizes	{ 1/4-20 5/16-18 3/8-16 7/16-14 1/2-13	 1/4-20 5/16-18 3/8-16 7/16-14 1/2-13
Dies, Diam., Ins.	1	1
Stock Nos.	14	14
Length Ins.	9	9
Tap Wrench Nos.	333	333
Mfr's List Per Set	\$15.00	\$17.50
Per Set	\$15.00	\$17.50

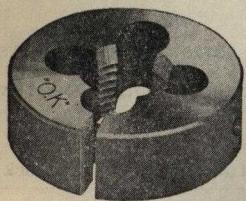


### AUTOMOBILE SCREW PLATES

Designed especially for automobile and general repair work, this combination set contains an "O. K." Jr. Round Die 1 inch O. D. and an "O. K." Jr. Tap for each of the 11 cutting sizes, with a three-screw die stock and a tap wrench for holding the dies and taps.

These sets contain American National Standard threads.

Set Number	M-3100		
Thread Standard	NC	NF	Pipe
Cutting Sizes	{ 1/4-20 5/16-18 3/8-16 7/16-14 1/2-13	 1/4-28 5/16-24 3/8-24 7/16-20 1/2-20	 1/8
Dies, Diam., Inches	1	1	1
Stock No.	14, 9	Ins. Long	
Tap Wrench, No.		333	
No. M-3100 Mfr's List, Per Set		\$25.00	
Per Set		\$25.00	

**Replacement Parts for "O. K." Jr. Screw Plates****"O. K." Jr. Round Dies**

Designed for use in screw plate—not recommended for production work in machines. In ordering be sure to specify outside diameter and thread standard wanted.

No. M-3820

**Cutting Size,**

Screw Gauge	Outside Dia.—Each,			Number of Threads to Inch			
	1 $\frac{3}{16}$ "	1"	1 $\frac{1}{2}$ "	2"	NC	NF	NS
0	± \$1.50	.....	.....	.....	80	.....	.....
1	± 1.50	.....	.....	.....	72	.....	.....
2	± 1.30	.....	.....	.....	56	.....	.....
3	± 1.15	.....	.....	.....	48	.....	.....
4	1.00	.....	.....	.....	40	48	36
6	1.00	.....	.....	.....	32	40	.....
8	1.00	.....	.....	.....	32	36	.....
10	1.00	.....	.....	.....	24	32	.....
12	1.00	.....	.....	.....	24	28	.....

**Inches**

1 $\frac{1}{16}$	1.50	.....	.....	.....	.....	64
3 $\frac{1}{2}$	1.15	.....	.....	.....	.....	48
1 $\frac{1}{8}$	1.00	± \$1.25	.....	.....	.....	40
5 $\frac{1}{2}$	± 1.00	.....	.....	.....	.....	36
3 $\frac{1}{16}$	1.00	± 1.25	.....	.....	.....	24
7 $\frac{1}{2}$	1.00	.....	.....	.....	.....	24
1 $\frac{1}{4}$	1.00	1.25	.....	20	28	.....
5 $\frac{1}{16}$	.....	1.25	.....	18	24	.....
3 $\frac{1}{8}$	.....	1.25	.....	16	24	.....
7 $\frac{1}{16}$	.....	1.25	± \$2.00	14	20	.....
1 $\frac{1}{2}$	.....	1.25	± 2.00	13	20	± 12
3 $\frac{1}{16}$	.....	.....	± 2.00	12	18	.....
5 $\frac{1}{8}$	.....	.....	± 2.00	11	18	.....
1 $\frac{1}{16}$	.....	.....	± 2.00	16	.....	.....
3 $\frac{1}{4}$	.....	.....	± 2.00	10	16	.....
7 $\frac{1}{8}$	.....	.....	± 3.50	9	14	.....
1	.....	.....	± 4.00	8	14	.....
1 $\frac{1}{8}$ Pipe	.....	± 1.25	.....	NPT	.....	.....
3 $\frac{1}{8}$ Pipe	.....	2.50	.....	NPT	.....	.....

**"O. K." Jr. Adjustable Die Stocks**

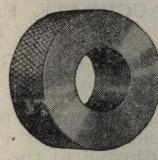
Sturdily built—well balanced—handsomely finished in red. Holds adjustable round split dies in  $\frac{1}{8}$ -inch to 2-inch outside diameters.

Adjustable guide facilitates the starting of the die onto the work and

insures cutting of straight threads. Can be set instantly to fit any size rod within its range by turning the cam plate and locking it in place by set screws.

Nos.	Mfr's List, Each	Diam. of Dies, In.	Length, In.	Each
M-OK13	\$1.75	1 $\frac{3}{16}$	6 $\frac{1}{4}$	\$2.10
M-OK14	2.25	1	9	2.70
M-OK15	3.50	1 $\frac{1}{2}$	17 $\frac{1}{4}$	4.20
M-OK16	4.50	2	26	5.40

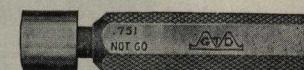
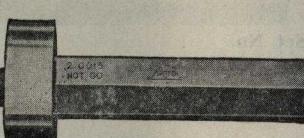
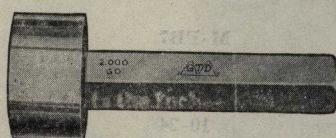
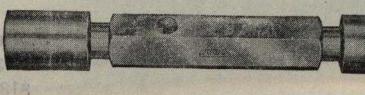
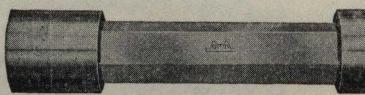
Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.  
\*Goods marked thus (±) are not carried in stock and can be furnished only by shipment direct from factory.

**Greenfield Tools****CYLINDRICAL GAGES  
RING GAGES****"Go" Ring Gage  
Style M-1601****"Not Go" Ring Gage  
Style M-1606**

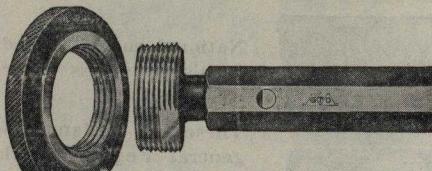
(Sizes Above 1.510)

"Go" Ring Gage, Style M-1601

"Not Go" Ring Gage, Style M-1606

**PLUG GAGES**M-1602 "Go" and M-1603 "Not Go"  
Class X—Precision Lapped**TAPER INSERT TYPE****END LOCKING TYPE****Plug Gages**No. M-1611 Double End "Go" and "Not Go"  
Class X—Precision Lapped**TAPER INSERT TYPE****END LOCKING TYPE**

Prices quoted on application

**TAPER PIPE THREAD PLUG AND RING GAGES**

American National standard right hand taper thread (NPT) furnished, unless otherwise specified.

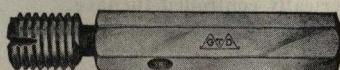
British standard (Whitworth) thread gages also furnished, prices on application.

M-1560	Numbers, Each	Ring	Size, In.	No. of Threads to Inch
14.00		M-1562	$\frac{1}{8}$	27
16.20			$\frac{1}{4}$	18
19.00			$\frac{5}{16}$	18
21.50			$\frac{1}{2}$	14
24.50			$\frac{3}{4}$	14
27.00			1	11 $\frac{1}{2}$
30.00			$1\frac{1}{4}$	11 $\frac{1}{2}$
34.00			$1\frac{1}{2}$	11 $\frac{1}{2}$
40.00			2	11 $\frac{1}{2}$
48.00			$2\frac{1}{2}$	8
± 56.50			3	8
± 78.00			$3\frac{1}{2}$	8
± 89.00			4	8
± 100.00			$4\frac{1}{2}$	8
± 111.00			5	8
± 134.00			6	8

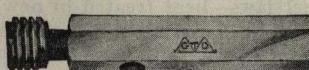
We can furnish "master" and "reference" pipe thread gages. Prices and deliveries on application.

# GREENFIELD TOOLS

THREAD LIMIT PLUG GAGES—NATIONAL COARSE AND NATIONAL FINE SERIES MACHINE SCREW SIZES



M-1502—"Go" Style



M-1551—"Not Go" Style



M-1520—Double-End Style

#### Made to American Gage Design Standards

The extra length of the "Go" Gage helps to distinguish it from the "Not Go". Single End Gages furnished unless otherwise specified. Rex Finish greatly increases life of a gage. This process gives a gage an unusually hard surface which resists ordinary abrasion amazingly and will not chip or crack in use.

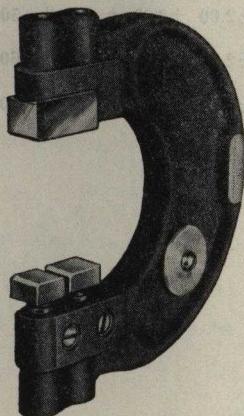
Prices quoted upon application for Thread Limit Plug Gages other than listed below.

#### Regular Finish

#### Each-X Tolerance

Size	Threads Per Inch	NC	NF	Double End Plug, Handle		Plug "Go"		Plug "Go"		"Not Go" Members	
				Complete With Handle, Class 2 or Class 3	Only, Class 3	Mem- bers (Specify Class)	Complete With (Specify No.)	Handle (Specify No.)	Only, Class 3	With (Specify Class)	
0	....	80		+\$31.40	+\$1.50	\$11.10	\$12.60	+\$18.80			
1	64	72		+\$31.40	+\$1.50	11.10	12.60	+\$18.80			
2	56	64		+\$31.40	+\$1.50	11.10	12.60	+\$18.80			
3	48	56		+\$29.00	+\$1.50	10.20	11.70	+\$17.30			
4	40	48		23.70	1.50	10.20	11.70	12.00			
5	40	44		21.80	1.50	9.30	10.80	11.00			
6	32	40		21.80	1.50	9.30	10.80	11.00			
8	32	36		21.80	1.50	9.30	10.80	11.00			
10	24			21.80	1.50	9.30	10.80	11.00			
12	24			21.80	1.50	9.30	10.80	11.00			
1/4	20			18.20	1.20	7.80	9.00	9.20			
5/16	18	24		18.20	1.20	7.80	9.00	9.20			
3/8	16	24		19.60	1.20	8.40	9.60	10.00			
7/16	14	20		19.60	1.20	8.40	9.60	10.00			
1/2	13	20		20.80	1.20	9.00	10.20	10.60			
9/16	12	18		22.95	1.20	10.00	11.20	11.75			
5/8	11	18		22.95	1.20	10.00	11.20	11.75			
3/4	10	16		25.55	1.20	11.20	12.40	13.15			
7/8	9	14		27.80	1.50	12.10	13.60	14.20			
1	8	14		30.90	1.50	13.50	15.00	15.90			
1 1/8	7	12		+\$43.30	+\$1.50	+\$15.50	+\$17.00	+\$26.30			
1 1/4	7	12		+\$48.20	+\$1.80	+\$17.20	+\$19.00	+\$29.20			
1 3/8	6	12		+\$53.40	+\$1.80	+\$19.20	+\$21.00	+\$32.40			
1 1/2	6	12		+\$57.70	+\$1.80	+\$21.20	+\$23.00	+\$34.70			

#### ADJUSTABLE LIMIT SNAP GAGES



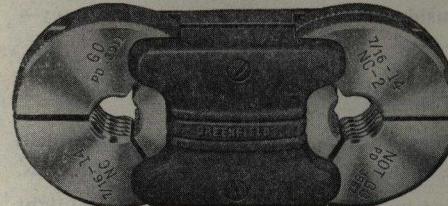
#### American Gage Design, Model SC

As the button type anvils are slightly wider than the gage frame, they will check work close to the shoulder.

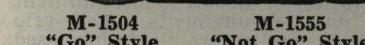
Equipped with one stationary anvil and two button type anvils. The stationary anvil is an aid in locating and lining up the gage with the work being inspected.

When ordering, specify frame number or, if wanted set and sealed, the Go and Not Go sizes to be gaged.

#### RING THREAD GAGES "GO" AND "NOT GO"



M-1504  
"Go" Style



M-1555  
"Not Go" Style

No. 1524—both gages with holder.

#### Each-X Tolerance

Size, In.	Threads Per Inch	NC	NF	Threads With Holder		Ring Gages With Holder		"Go" Ring		"Not Go"		Holder Only	Ring Size No.
				M-1524	M-1504	M-1524 Class 2 & 3 (Specify Class)	M-1504 Class 2 & 3 (Specify Class)	M-1555	M-1535	M-1535	M-1535		
0	....	80				+\$59.60		\$14.80		+\$41.70		+\$3.10	00
1	64	72		+\$31.40		59.60		14.80		41.70		3.10	00
2	56	64		+\$31.40		59.60		14.80		41.70		3.10	00
3	48	56		+\$29.00		58.50		13.70		41.70		3.10	00
4	40	48				35.10		13.70		18.30		3.10	00
5	40	44				32.70		12.70		16.90		3.10	00
6	32	40				32.70		12.70		16.90		3.10	00
8	32	36				32.70		12.70		16.90		3.10	0
10	24	32				32.70		12.70		16.90		3.10	0
12	24	28				32.70		12.70		16.90		3.10	0
1/4	20	28				27.70		10.50		14.10		3.10	1
5/16	18	24				27.70		10.50		14.10		3.10	1
3/8	16	24				29.80		11.20		15.00		3.60	2
7/16	14	20				29.80		11.20		15.00		3.60	2
1/2	13	20				31.60		12.00		16.00		3.60	2
9/16	12	18				35.60		13.10		17.60		4.90	3
5/8	11	18				35.60		13.10		17.60		4.90	3
3/4	10	16				38.80		14.50		19.40		4.90	3
7/8	9	14				43.10		16.00		21.10		6.00	4
1	8	14				47.10		17.60		23.50		6.00	4
1 1/8	7	12				52.40		20.00		26.40		6.00	4
1 1/4	7	12				58.90		22.30		29.40		7.20	5
1 3/8	6	12				64.80		24.70		32.90		7.20	5
1 1/2	6	12				70.60		27.00		36.40		7.20	5

Style And Frame Nos.	Mfrs. List Each	Range
M-1616SC-1	+\$10.80	0 - 1/4
M-1616SC-2	+\$11.50	1/4 - 1/2
M-1616SC-2A	+\$11.50	1/2 - 3/4
M-1616SC-3	+\$12.00	3/4 - 1
M-1616SC-3A	+\$12.00	1 - 1 1/4
M-1616SC-4	+\$12.50	1 1/4 - 1 1/2
M-1616SC-4A	+\$12.50	1 1/2 - 1 3/4
M-1616SC-5	+\$13.50	1 3/4 - 2
M-1616SC-5A	+\$13.50	2 - 2 1/4
M-1616SC-6	+\$14.00	2 1/2 - 2 3/4
M-1616SC-6A	+\$14.00	2 3/4 - 3 1/6
M-1616SC-7	+\$15.00	3 1/6 - 3 1/6
M-1616SC-7A	+\$15.00	3 7/16 - 3 13/16
M-1616SC-8	+\$16.00	3 13/16 - 4 3/16
M-1616SC-8A	+\$17.00	4 3/16 - 4 1/16
M-1616SC-9	+\$17.00	4 9/16 - 4 1/16
M-1616SC-9A	+\$19.00	4 15/16 - 5 1/16
M-1616SC-10	+\$19.00	5 5/16 - 6 1/16
M-1616SC-10A	+\$21.00	6 1/16 - 6 5/16
M-1616SC-11	+\$21.00	6 5/16 - 6 1/8
M-1616SC-11A	+\$23.00	6 1/8 - 7 1/8
M-1616SC-12	+\$23.00	7 1/8 - 7 5/8
M-1616SC-12A	+\$24.00	7 5/8 - 8 1/8
M-1616SC-13	+\$24.00	8 1/8 - 8 5/8
M-1616SC-13A	+\$25.00	8 5/8 - 9 1/8
M-1616SC-14	+\$25.00	9 1/8 - 9 5/8
M-1616SC-14A	+\$26.00	9 5/8 - 10 1/8
M-1616SC-15	+\$26.00	10 1/8 - 10 5/8
M-1616SC-15A	+\$27.00	10 5/8 - 11 1/8
M-1616SC-16	+\$27.00	11 1/8 - 11 5/8
M-1616SC-16A	+\$27.00	

Retail prices quoted above are those found to be prevailing in the Cleveland area. Freight to destination should be added.

\* Goods marked thus (+) are not carried in stock and can be furnished only by shipment direct from factory.

With Holder  
In ordering, specify whether  
gages are for Class 2 or 3 fit.  
Prices quoted upon application  
for thread ring gages  
other than those listed below.